

Henry Earnest

+1 (309) 830-7825 | henry_earnest@brown.edu | [Portfolio](#) | [LinkedIn](#) | [GitHub](#) | [Itch](#)
69 Brown St. Box # 9043, Providence, Rhode Island 02912

EDUCATION

Brown University | B.Sc, Computer Science | GPA: 3.9

Providence, RI | **Expected Graduation May 2025**

- Relevant coursework: *2D Game Engines, 3D Game Engine Development, Computer Graphics, Data Structures and Algorithms, Computer Vision, Software Engineering, Deep Learning, Data Structures and Algorithms, Computer Systems*

GAME DEVELOPMENT PROJECTS

Scale Mail | Lead Programmer | *Godot (team of 7)*

Aug 16th-20th, 2024

- Ranked #4 out of 7608 entries in the Game Maker's Toolkit yearly 4-day game jam as an inventory management game.
- Ranked #2 in the Enjoyment category, with satisfying inventory management mechanics and charming art.
- Received the "Top Marks" award, a category for the top 20 games handpicked by the jam creator, Mark Brown.
- Designed and implemented the item system, including resizing, placement, and inventory mechanics.
- Programmed screen transitions, the level select screen, interactive credits screen, victory screen, and most UI elements.
- Developed unique mechanics like the item weight system, candy jar scoring system, and 3-star scoring system.

Inkbound | Lead Programmer | *Unity, C# (team of 15 at Brown-RISD Game Design)*

Sep 2024 – Present

- Created 30+ tasks for fellow developers to complete in an organized programmer notes document.
- Described the 12 C# classes in the codebase in the same document for programmers to reference.
- Implemented and structured all of the core functionality of the game, creating a demo prototype and playtesting it with non-programmers.

Suntower | Solo Programmer, Artist | *Godot (team of 2)*

Mar 2024 - Present

- Utilized a combination of custom rope physics and raycasting to create an innovative rage platformer with custom art assets.
- Received >10 hours of playtesting time and recorded feedback notes from 15+ friends and fellow developers.
- Collaborated with a composer teammate and brainstormed potential game mechanics, accounting for sound design directions.

Final Farm, Nullify Light, Kanjou Meisou, Fearthink, Boiling Point | Programmer, Artist | *(teams of 1-3) Feb - Sep 2024*

- Developed 5+ games in a variety of genres for public Godot-based game jams (*Godot Wild Jams #66-70*).
- Created a complete planet-based gravity platformer in 24 hours for the Hack@Brown hackathon. (**Boiling Point**)
- Helped a friend soothe psychological distress with a meditation simulator made for Advanced Japanese II. (**Kanjou Meisou**)

3D Game Engine | *C++ (solo)*

Spring 2024

- Built a complex 3D game engine with 3D mesh collisions, an entity-component system (ECS), and navmesh pathfinding.
- Collaborated with a classmate working in my engine to create an aim trainer game with polished UI as a final project.

2D Game Engine | *Java, JavaFX (solo)*

Fall 2023

- Constructed an extensible Java 2D game engine, writing 9500+ lines of code over the course of a semester.
- Implemented concepts including a UI toolkit system, polygon collisions, A* pathfinding, XML loading, and 2D physics.

TECHNICAL EXPERIENCE

2D Game Engines | Head Teaching Assistant, Lecturer

Providence, RI | Sep 2024 – Present

- Lecturing 12-25 students weekly on game development and game engine material.
- Grading programming assignments from students, requiring analysis of unfamiliar codebases.
- Holding 4 office hours every week for conceptual questions and debugging support.

Brown University School of Engineering | IT Technical Assistant

Providence, RI | Sep 2022 – Present

- Solved a bug that blocked IT operations for 30+ days, and documented both causes and solutions of the issue.
- Deployed 40+ staff computers, meticulously following deployment procedures.
- Implemented Excel formulas that save 10% of IT staff time by automating inventory field population.
- Handling distressed customers, quickly diagnosing their issues and discussing solutions with them.

Town of Normal | IT Intern

Normal, Illinois | Jun 2023 – Aug 2023

- Condensed 8+ onboarding pages into one TypeScript-based interactive web part for onboarding new employees.
- Converted 2 years of unorganized Fire Department calendar data into an accessible, modern SmartSheet for future usage.

SKILLS & INTERESTS

Programming Languages: C#, GDScript, Java (5 yrs), Python, JavaScript, C, C++, HTML/CSS, x86 Assembly

Frameworks/Libraries: Godot, Unity, Git, OpenGL, MongoDB, SparkJava, SPFX, NumPy, Tensorflow, React.js,

Activities & Interests: Pixel Art, Music Production, Competitive Gaming, Jiu Jitsu, Calisthenics, Meditation